



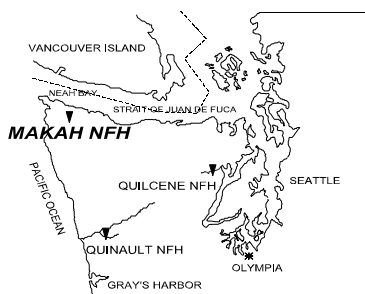
MAKAH NATIONAL FISH HATCHERY

Neah Bay, Washington

INTRODUCTION

The Western Washington Fish and Wildlife Office (WWFWO) and the Olympia Fish Health Center (OFHC) assist the three National Fish Hatcheries (NFH) on the Olympic Peninsula -- Makah, Quilcene, and Quinalt (see locale map below). The WWFWO, OFHC, and NFHs work together to restore salmon for domestic and international fisheries in compliance with Trust responsibilities to tribes, court orders, agreements with states, and international treaties. WWFWO works with cooperators to program and evaluate hatchery production to assure obligations are met with minimal impact on wild fish. OFHC provides fish health diagnostic and treatment services to assure optimal post-release survival of hatchery fish.

This annual report provides basic information on Makah NFH to inform Service employees, visitors, and our cooperators of their hatchery programs.



Western Washington locale map

Makah NFH, located on the northwest tip of the Olympic Peninsula, began operating in 1981. Its general goals include rebuilding salmon and steelhead runs along the coast of Washington and contributing to current and future fisheries. Specific objectives to meet these goals vary by species and are described on the following pages.

QUICK REFERENCE DATA

LEGEND:	AVG	=	Average (mean)
	BY	=	Brood Year
	FL	=	Fork Length
	COS	=	Coho Salmon
	FCS	=	Fall Chinook Salmon
	WST	=	Winter Steelhead
	♀	=	Female
	♂	=	Male

ADULT AGES AT RETURN

	AGE RANGE	2001 AVG. AGE	1986-2001 AVG. AGE
FCS	2-6 yrs.	3.2	3.6
COS	2-3 yrs.	2.9	2.8
WST	2-6 yrs.	3.3	3.3

ADULT FORK LENGTHS in millimeters (inches)

	FL RANGE	FL MEAN
FCS	203-1127mm (8-44")	780mm (31")
COS	317-830mm (12-32")	628mm (25")
WST	330-985mm (13-39")	624mm (25")

ADULT ENTRY DATES TO HATCHERY

	1988-2001 RANGE	1999 MEAN DATE
FCS	Sep - Nov	Oct 11, 1999
COS	Sep - Dec	Oct 27, 1999
WST	Sep - Feb	Dec 20, 1999

NUMBER AND DATES OF ADULTS SPAWNED

	2001 Date Range	2001 # Spawned ♂ ♀ Total	1986-2001 Avg # Spawned
FCS	09/27-10/15	727 748 1475	890
COS	10/18-11/05	265 254 419	526
WST	11/26-01/07	233 199 432	460

Please direct questions, comments, and suggestions to:



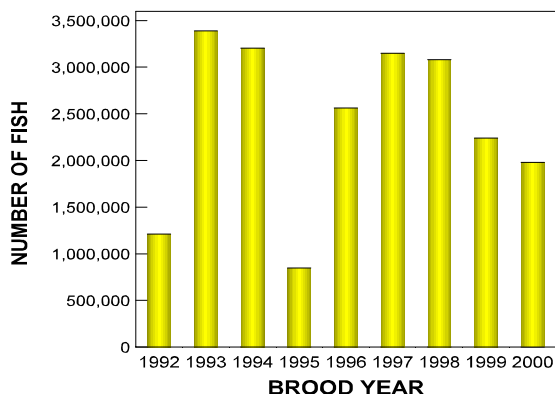
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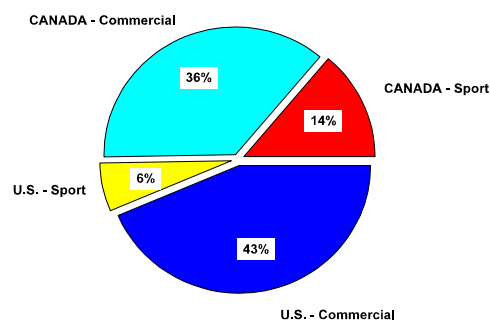


FALL CHINOOK SALMON

FALL CHINOOK RELEASES
(Brood Years 1992 - 2000)



CATCH OF FALL CHINOOK
(Brood Years 1985-1997)



OBJECTIVES: Rebuild Sooes River FCS run to approximately 8,000 returning adults. Contribute to local fisheries near Cape Flattery, as well as tribal fisheries in the Sooes and Waatch Rivers.

RELEASES: The program goal is the release of 3.2 million 3.5-inch fish (subyearlings) at the hatchery. The upstream goal is to have 120 females produce naturally-spawned eggs or fed-fry equivalent (sufficient adults are passed upstream to seed the watershed). When available, 100,000 fish are transferred to the Makah Tribe's Educket Creek facility on the Waatch River for rearing and release.

CATCH: Commercial fisheries account for 83% of all fish captures. Of the FCS produced by Makah NFH, 50% are caught in Canadian waters, 36% in Alaska, 4% in Washington waters. The portion caught in Washington will increase as the run builds and directed fisheries in the Sooes River occur.

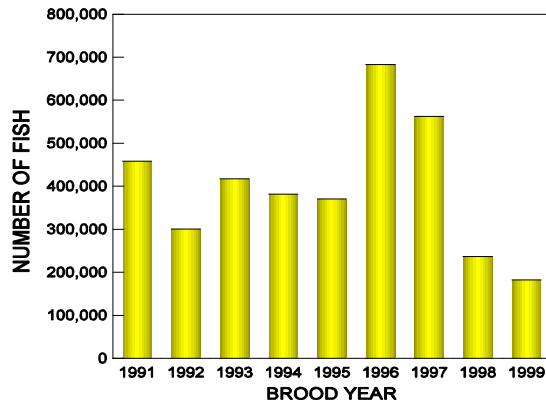
FCS RETURNS TO HATCHERY RACK AND RIVER BY RETURN YEAR

Return Year	Age at Return					Total per Year
	2	3	4	5	6	
1993	12	153	2,145	0	0	2,310
1994	79	35	359	1,044	0	1,517
1995	48	564	167	292	22	1,093
1996	6	1,790	1,671	117	2	3,586
1997	88	153	2,522	112	0	2,875
1998	77	306	720	1,031	0	2,134
1999	46	361	549	364	25	1,345
2000	363	390	507	136	9	1,395
2001	604	502	807	71	8	1,992

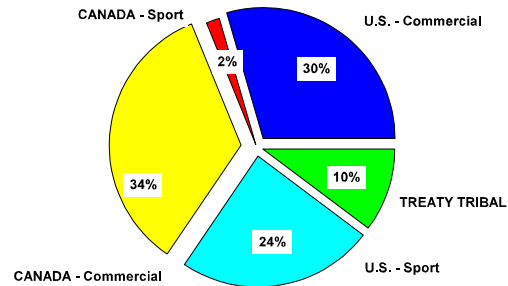
The run is successfully building. Beginning in 1997, tribal fisheries have been conducted in the Sooes River.

COHO SALMON

COHO RELEASES (Brood Years 1991 - 1999)



CATCH OF COHO (Brood Years 1988-1998)



OBJECTIVES: Build coho runs in Cape Flattery area. Contribute to local fisheries near Cape Flattery, as well as tribal fisheries in the Sooes and Waatch Rivers.

RELEASES: Approximately 234,000 coho yearlings are released annually into the Sooes River. An additional 50,000 subyearlings are provided to the Makah Tribe's facility on Educket Creek. Sufficient adults are passed upstream to seed the watershed.

CATCH: An average of 6,400 fish (from the 220,000 released at the hatchery) are caught in U.S. and Canadian waters each year.

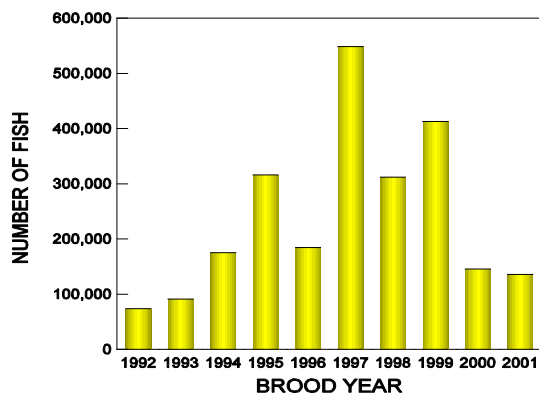
COHO RETURNS TO HATCHERY RACK AND RIVER BY RETURN YEAR

Return Year	Age at Return		Total per Year
	2	3	
1992	367	4,459	4,826
1993	77	1,709	1,786
1994	1,119	5,024	6,143
1995	493	7,530	8,023
1996	200	5,395	5,595
1997	492	2,193	2,685
1998	446	2,969	3,415
1999	492	7,842	8,334
2000	504	4,401	4,905
2001	438	6,388	6,826

The current coho program contributes to various fisheries and is very successful. Average survival is 4 percent. A coho mass-marking program was initiated in the fall/winter of 1997-98 to support selective fisheries.

WINTER STEELHEAD

WINTER STEELHEAD RELEASES (Brood Years 1992 - 2001)



CATCH OF WINTER STEELHEAD (1991 - 2002)

Catch Year	Number Caught	
	Sooes River	Waatch River
1989-90	2,429	408
1990-91	1,134	531
1991-92	2,147	813
1992-93	4,233	319
1993-94	1,068	205
1994-95	1,826	163
1995-96	1,857	143
1996-97	2,133	20
1997-98	1,539	166
1998-99	2,967	50
1999-00	963	31
2000-01	1,406	74
2001-02	2,200	90

OBJECTIVE: Increase commercial and sport fishing opportunities and harvest in the Sooes and Waatch Rivers.

RELEASES: The current production goal is the release of 175,000 yearlings into the Sooes River and transfer of 25,000 yearlings to the Waatch River.

CATCH: Winter steelhead are caught in commercial and sport fisheries in the Sooes and Waatch Rivers. Few are caught in the ocean.

WST RETURNS TO HATCHERY RACK AND RIVER BY RETURN YEAR

Return Year	Age at Return				Total per Year
	2	3	4	5	
1992-93	1	267	126	2	396
1993-94	1	196	93	4	294
1994-95	21	459	163	3	646
1995-96	0	776	48	0	824
1996-97	2	345	131	5	483
1997-98	5	248	194	1	449
1998-99	6	2,284	734	1	3,025
1999-00	0	512	119	2	633
2000-01	38	342	330	2	712
2000-02	8	579	247	16	850

Steelhead are managed as two populations - a hatchery population, entering from October to February, and a wild population, entering from March to May. The wild population is allowed to move upstream past the hatchery to spawn naturally.